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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/823,470	03/30/2001	Kenji Yamagami	36992.00073 (HAL 170)	5742
30256	7590	07/15/2004	EXAMINER	
SQUIRE, SANDERS & DEMPSEY L.L.P. 600 HANSEN WAY PALO ALTO, CA 94304-1043			SIDDIQI, MOHAMMAD A	
			ART UNIT	PAPER NUMBER
			2154	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	09/823,470		YAMAGAMI, KENJI	
	Examiner		Art Unit	
	Mohammad A Siddiqi		2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-20 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Venkatesh et al. (5,974,503) (hereinafter Venkatesh).
4. As per claim 10, Venkatesh discloses, a method for minimizing cost of network access by a storage apparatus, said method comprising:
specifying a first network to be used for transferring data (col 9, lines 22-24);
specifying a constraint for said first network (col 14, lines 28-67);

specifying a second network to be used for transferring data (col 9, lines 22-24);

transferring data using said first network when conditions in said first network are in accordance with said constraint, otherwise transferring data using said second network (col 9, lines 22-27, col 14, lines 28-67).

5. As per claim 11, Venkatesh discloses, further comprising:

transferring a portion of said data using said first network even when conditions in said first network are not in accordance with said constraint as a test (col 9, lines 22-27, col 14, lines 28-67);

monitoring conditions in said first network during said test (col 9, lines 22-27, col 14, lines 28-67); and

returning to transferring data using said first network when said test reveals that conditions in said first network are again in accordance with said constraint (col 9, lines 22-27, col 14, lines 28-67).

6. As per claim 12, Venkatesh discloses wherein said first network is relatively less expensive to use than said second network (col 19, lines 1-9).

7. As per claim 13, Venkatesh discloses wherein specifying said constraint for said first network comprises specifying at least one of a

throughput, a busy rate, an error rate, and a presence of an error (col 14, lines 28-67).

8. As per claim 14, Venkatesh discloses wherein said first network is a public network and said second network is a private network (file access operations, col 6, lines 1-29).

9. As per claim 15, Venkatesh discloses further comprising: making said first network a higher priority network than said second network (fig 2, col 19, lines 1-9, col 6, lines 1-29).

10. As per claim 16, Venkatesh discloses further comprising: detecting an abnormal condition in said first network and thereupon transferring data using said second network (col 9, lines 22-27, col 14, lines 28-67).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-9 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beardsley et al. (5,680,580) (hereinafter Beardsley) in view of Venkatesh et al. (5,974,503) (hereinafter Venkatesh).

13. As per claims 1 and 17, Beardsley discloses storage system apparatus, comprising:

at least one of a plurality of disk drives (fig 1-3, col 4, lines 54-67);

a memory (col 1, lines 30-50), operable to contain path selection information (fig 1-3, col 4, lines 54-67);

a plurality of ports, providing switch-able connection to a plurality of clusters (fig 1-3, col 4, lines 54-67, col 5, lines 1-15, col 6, lines 22-64);
and

a processor (see abstract);

wherein said plurality of cluster each has at least one of a plurality of user provided policies associated therewith (role, fig 1-3, col 6, lines 22-64, col 10, lines 48-57), and wherein said processor (see abstract), based upon monitoring of at least one of a plurality of conditions in said plurality of clusters (check, col 6, lines 22-64, col 8, lines 34-49), selects at least one of said plurality of ports connecting said plurality of clusters (col 6, lines 22-64,

col 12, lines 30-40), based upon a comparison of said at least one of a plurality of conditions in said plurality of clusters (role, col 10, lines 48-57, col 12, lines 30-40).

Beardsley does not specifically disclose plurality of networks, plurality of user provided policies.

However, Venkatesh discloses Plurality of networks (fig 2, col 10, lines 30-40), a plurality of user provided policies (col 14, lines 28-57).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

14. As per claim 2, Beardsley discloses wherein said at least one of a plurality of conditions comprises at least one of a throughput, a busy rate, an error rate, and a presence of an error (abstract, col 12, lines 30-40).

15. As per claims 3 and 18, Beardsley discloses further comprising a plurality of status indications, said plurality of cluster each having at least one of said plurality of status indications associated therewith (fig 5, col 8, lines 52-63); and wherein said processor determines based upon said status indication whether to select a port from said at least one of a plurality of

ports connecting said plurality of clusters (fig 1-3, col 4, lines 54-67, col 5, lines 1-15, col 6, lines 22-64).

Beardsley does not specifically disclose plurality of networks.

However, Venkatesh discloses Plurality of networks (fig 2, col 10, lines 30-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

16. As per claims 4 and 20, Beardsley discloses further comprising a network monitor, said network monitor operable to detect a condition within at least one of said plurality of clusters, and thereupon set said value in said status indication (fig 1-5, col 4, lines 54-67, col 5, lines 1-15, col 6, lines 22-64).

Beardsley does not specifically disclose plurality of networks.

However, Venkatesh discloses Plurality of networks (fig 2, col 10, lines 30-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley

because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

17. As per claim 5, Beardsley discloses wherein said status indication comprises at least one of available, temporarily unavailable, and unavailable (fig 5, col 12, lines 30-40).

18. As per claim 6, Beardsley is silent about wherein said policy comprises at least one of a threshold, a maximum, a minimum, an average, a mean, a limit, a constraint, a priority, and a target.

However, Venkatesh discloses wherein said policy comprises at least one of a threshold, a maximum, a minimum, an average, a mean, a limit, a constraint, a priority, and a target (col 14, lines 28-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

19. As per claims 7 and 19, Beardsley, wherein said plurality of networks are grouped into a plurality of path groups, wherein said role are associated

with clusters in a particular path group (fig 1-3, col 4, lines 54-67, col 5, lines 1-15, col 6, lines 22-64).

Beardsley is silent about the policies and networks.

However, Venkatesh discloses policies (col 14, lines 28-67), networks (fig 2, col 10, lines 30-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

20. As per claim 8, Beardsley, wherein said at least one of a plurality of disk drives comprises at least one of a plurality of volumes (fig 6, col 10, lines 27-47).

21. As per claim 9, Beardsley, wherein each of said at least one of a plurality of volumes is permitted to access clusters of at least one of said plurality of path groups (fig 1-6, col 4, lines 54-67, col 5, lines 1-15, col 6, lines 22-64, col 10, lines 27-47).

Beardsley does not specifically discloses networks.

However, Venkatesh discloses networks (fig 2, col 10, lines 30-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Venkatesh with Beardsley because it would provide remote data storage system with load balancing while distributing large data file on a multiple disk drives.

Conclusion

22. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 6,442,706

U.S. Patent 6,230,200


U.S. Patent 6,260,120

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A Siddiqi whose telephone number is (703) 305-0353. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A Follansbee can be reached on (703) 305-8498. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MAS



ZARNI MAUNG
PRIMARY EXAMINER